FCC RADIO TEST REPORT

FCC ID	:	**WAP-CYSBSYS-RP01**
Equipment	:	**Wifi 802.11b/g/n/ac + BT/BLE**
Brand Name	:	**Cypress**
Model Name	:	**CYSBSYS-RP01**
Applicant	:	**Cypress Semiconductor, Inc. 198 Champion Court San Jose, CA 95134**
Manufacturer	:	**Cypress Semiconductor, Inc. 198 Champion Court San Jose, CA 95134**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Dec. 08, 2020 and testing was started from Dec. 08, 2020 and completed on Feb. 03, 2021. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Neil Kao

Approved by: Neil Kao

Sporton International (USA) Inc.

1175 Montague Expressway, Milpitas, CA 95035

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History of this test report

Report No.	Version	Description	Issued Date
FR201216001E	01	Initial issue of report	Mar. 03, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 10.69 dB at 888.450 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 12.53 dB at 0.396 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n and Wi-Fi 5GHz 802.11a/n/ac.

Product Specification subjective to this standard	
Antenna Type	WLAN: Chip Antenna Bluetooth: Chip Antenna

Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	1

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway, Milpitas, CA 95035 TEL: 408 904-3300
Test Site No.	**Sporton Site No.**
	TH01-CA, 03CH02-CA, CO01-CA

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

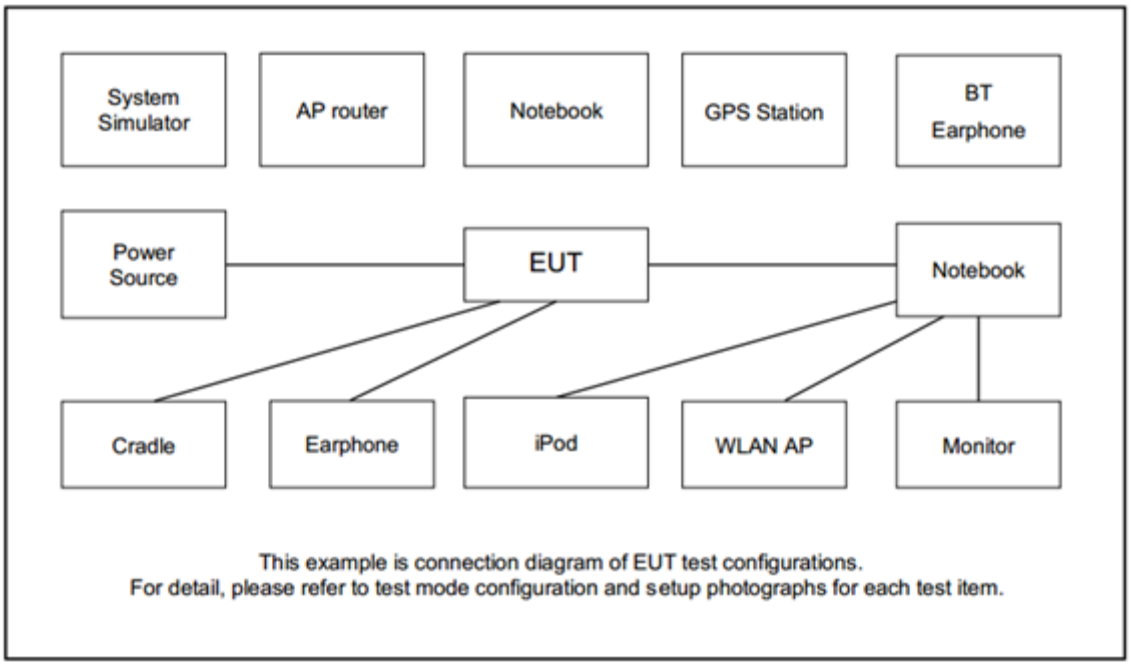
Modulation	Data Rate
802.11a	**6 Mbps**
802.11n HT20	**MCS0**
802.11ac VHT20 (Covered by HT20)	**MCS0**

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + Jig 1 (Fixture) + Jig 1-1 (Fixture) + Jig 1-1 Adapter
	Mode 2 : WLAN (5GHz) Link + Jig 1 (Fixture) + Jig 1-1 (Fixture) + Jig 1-1 Adapter
	Mode 3 : Bluetooth Link + Jig 1 (Fixture) + Jig 1-2 (Fixture) + Jig 1-2 Adapter
Remark: The worst case of conducted emission is mode 1; only the test data of it was reported.	

Ch. #		Band IV：5725-5850 MHz	
		802.11a	802.11n HT20
L	Low	149	149
M	Middle	157	157
H	High	165	165

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Altos PS548 Series	82600085033	FCC DoC	N/A	AC I/P：Unshielded, 1.2m DC O/P：Shielded, 1.8m
2.	WLAN AP	NetGear	R6080	PY316400359	N/A	N/A
3.	Jig 1 (Fixture)	Cypress	RP01	N/A	N/A	N/A
4.	Jig 1-1 (Fixture)	Cypress	CYW9SDIOAD_2	N/A	N/A	N/A
5.	Jig 1 -1 Adapter	SCEPTRE POWER	ATS036T-A050	N/A	N/A	Unshielded, 1.8m
6.	Jig 1-2 (Fixture)	GB-BXi7-4500	1419631173	NA	NA	NA
7.	Jig 1-2 Adaptor	FSP	FSP065-REBN2	NA	N/A	Unshielded, 1.8m

2.5 EUT Operation Test Setup

The RF test items, utility “PuTTY &Release 0.70” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

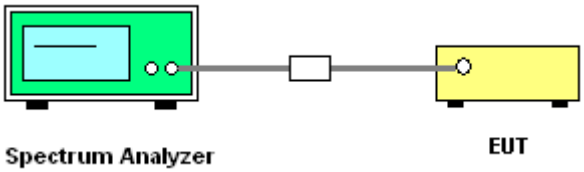
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth for the band 5.725-5.85GHz
2. Set RBW = 100kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

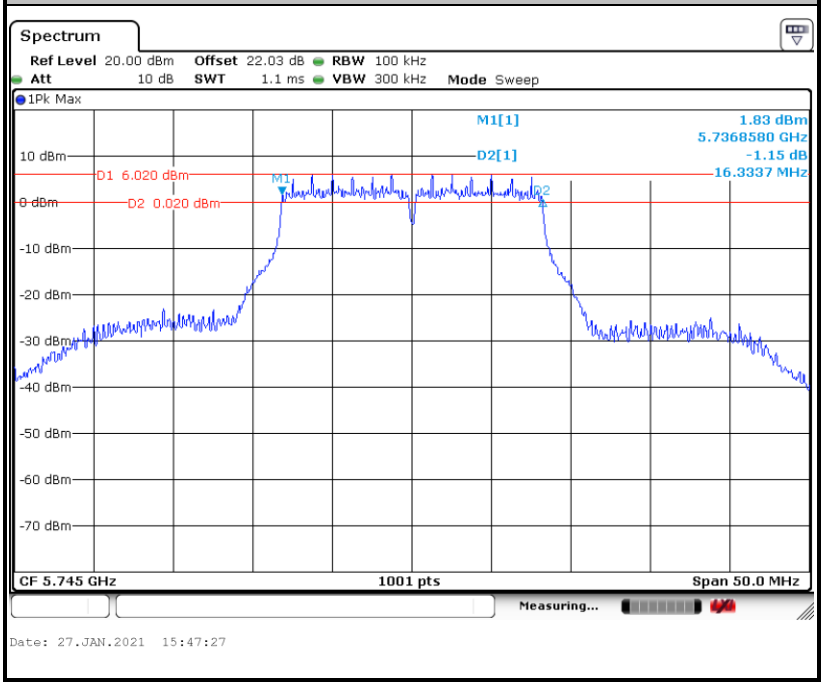
3.1.4 Test Setup



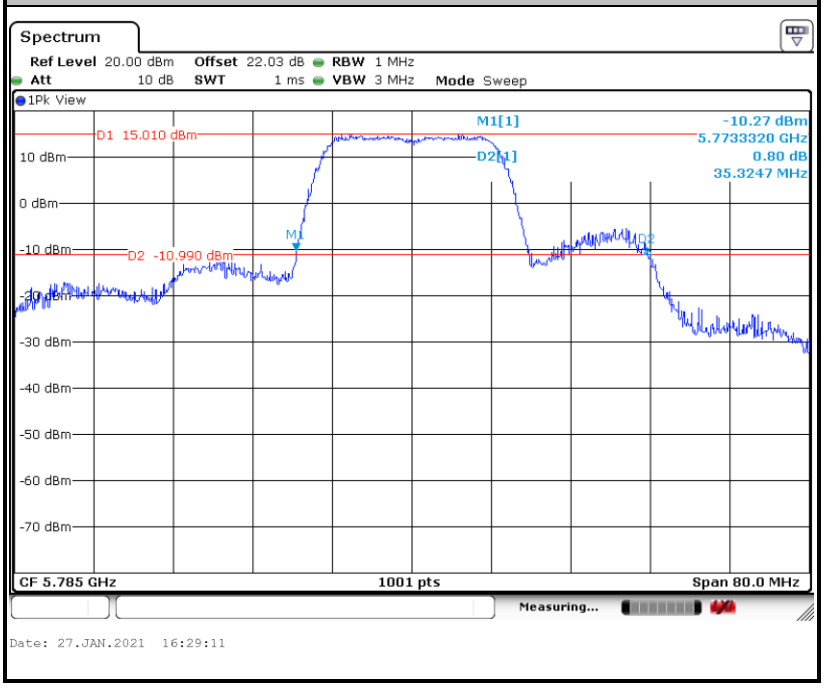
3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

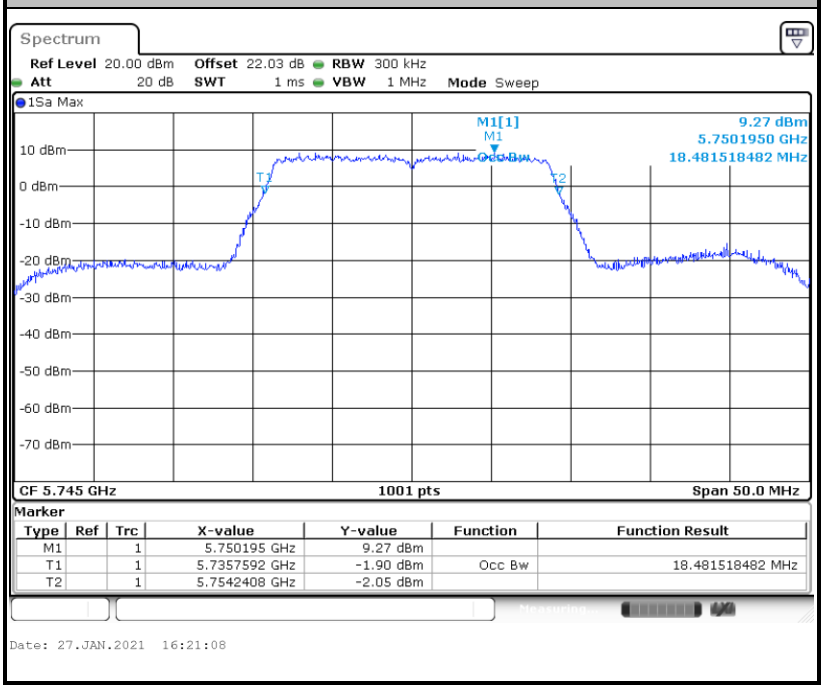
Minimum 6dB Bandwidth



Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

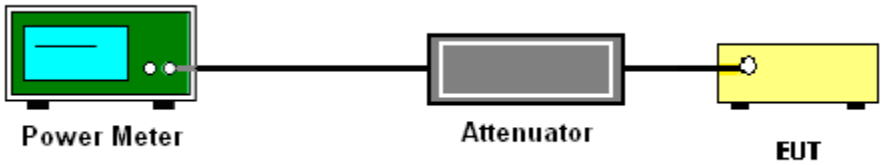
3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

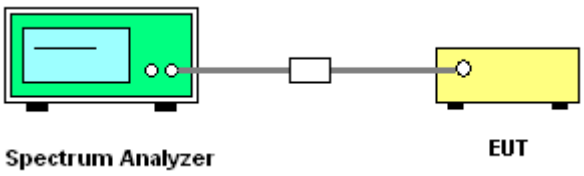
 # Method SA-3 #

(power averaging (rms) detection with max hold):

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time ≤ (number of points in sweep) × T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
  Detector = power averaging (rms).
- Trace mode = max hold.
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

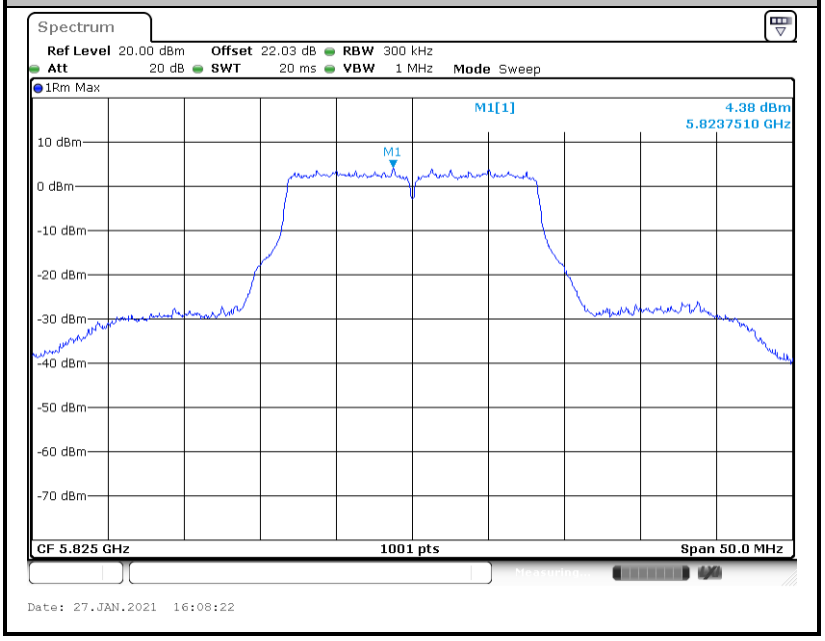
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

<Limit of Unwanted Emissions>

(1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of −27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.1 Measuring Instruments

See list of measuring equipment of this test report.

3.4.2 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

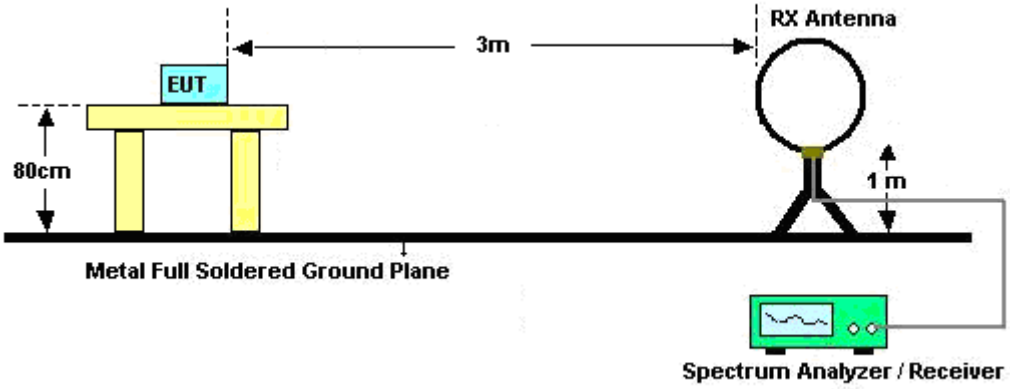
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.

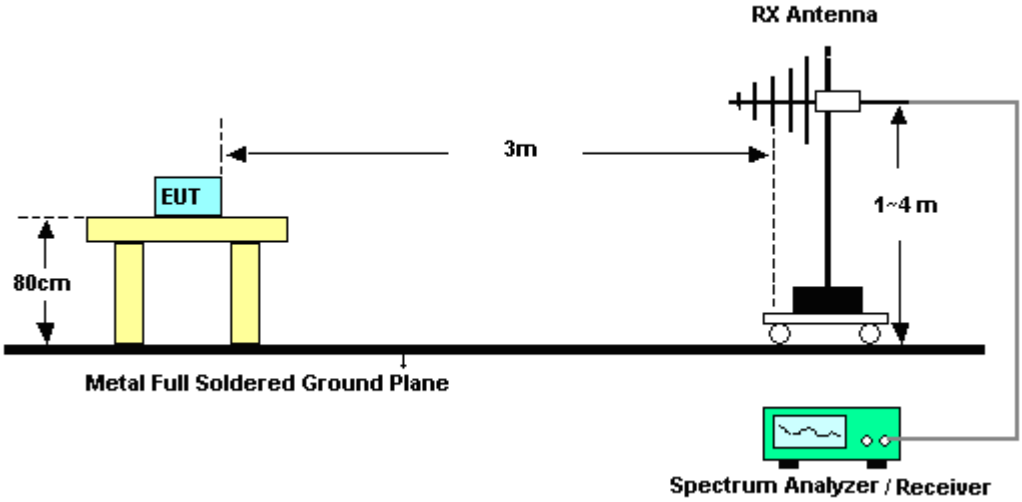
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.3 Test Setup

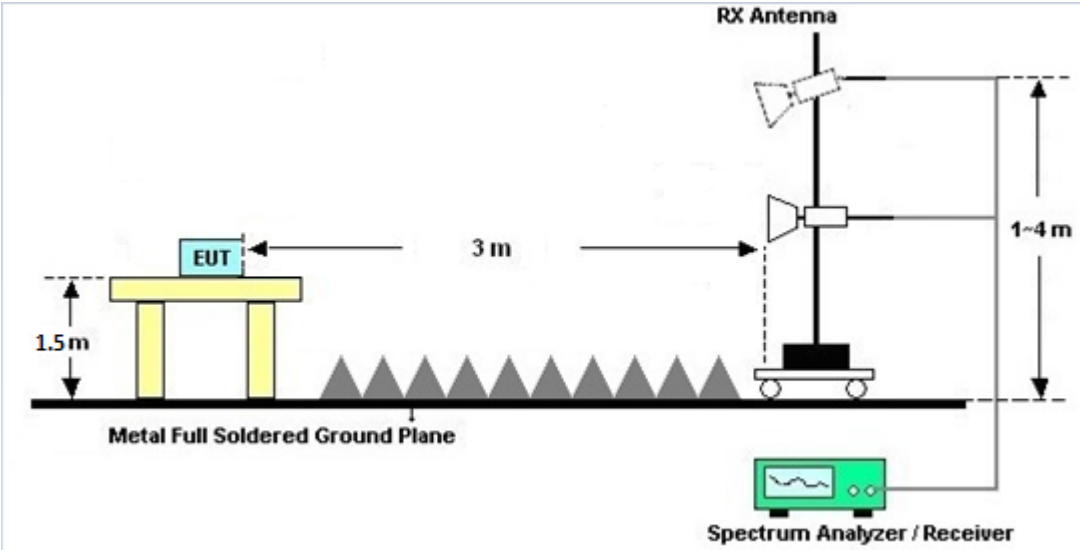
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated test above 1GHz



3.4.4 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.5 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.6 Duty Cycle

Please refer to Appendix E.

3.4.7 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

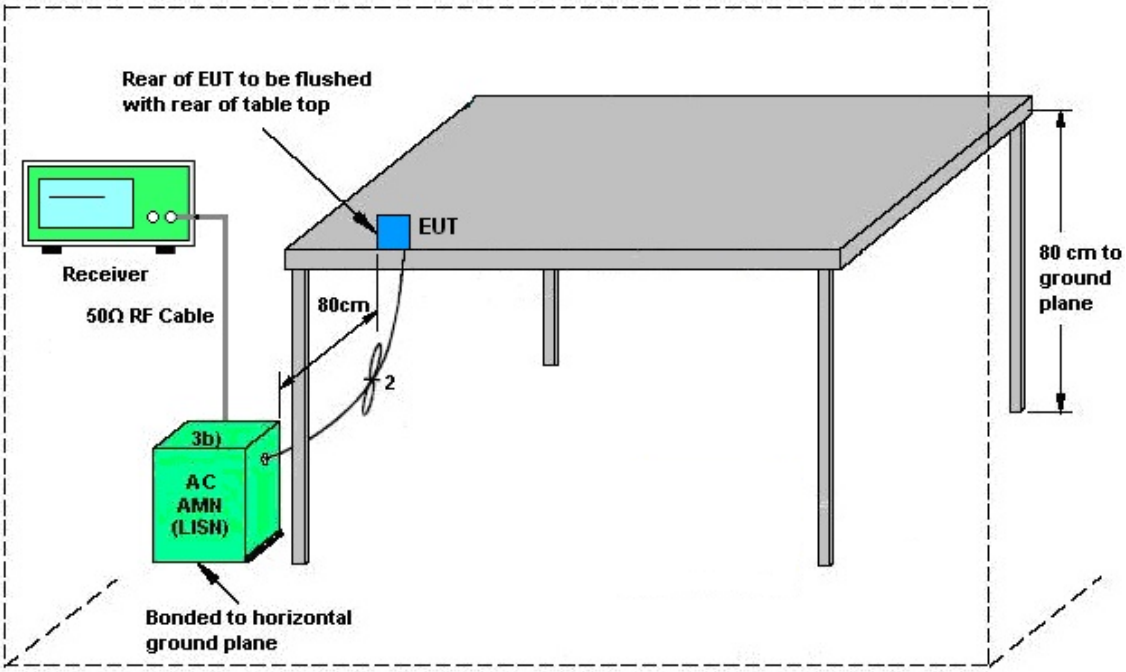
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Jul. 29, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 28, 2021	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	01895	1GHz~18GHz	Aug. 28, 2020	Dec. 08, 2020~ Feb. 03, 2020	Aug. 27, 2021	Radiation (03CH02-CA)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00842	18GHz~40GHz	Jul. 27, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 26, 2021	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372240	N/A	Aug. 12, 2020	Dec. 08, 2020~ Feb. 03, 2020	Aug. 11, 2021	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY53270321	1GHz~26.5GHz	Jul. 28, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 27, 2021	Radiation (03CH02-CA)
Preamplifier	EMEC	EMC18G40G	060725	18G-40G	Aug. 07, 2020	Dec. 08, 2020~ Feb. 03, 2020	Aug. 06, 2021	Radiation (03CH02-CA)
Preamplifier	E-instrument	ERA-100M-18G-56-01-A70	EC1900251	1GHz~18GHz	Nov. 26, 2019	Dec. 08, 2020~ Feb. 03, 2020	Nov. 25, 2021	Radiation (03CH02-CA)
EMI Test Receiver	Rohde & Schwarz	ESU26	100049	20Hz~26.5GHz	Aug. 11, 2020	Dec. 08, 2020~ Feb. 03, 2020	Aug. 10, 2021	Radiation (03CH02-CA)
Spectrum Analyzer	Keysight	N9010A	MY57420221	10Hz~44GHz	Sep. 11, 2020	Dec. 08, 2020~ Feb. 03, 2020	Sep. 10, 2021	Radiation (03CH02-CA)
Filter	Wainwright	Whkx8-5872.5-6750-18000-40ST	SN8	6.75G Highpass	Jul. 24, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 23, 2021	Radiation (03CH02-CA)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN10	3G Highpass	Jul. 24, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 23, 2021	Radiation (03CH02-CA)
Filter	Wainwright	WLK12-1200-1272-11000-40SS	SN2	1.2G Low Pass	Jul. 24, 2020	Dec. 08, 2020~ Feb. 03, 2020	Jul. 23, 2021	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Aug. 05, 2020	Dec. 08, 2020~ Feb. 03, 2020	Aug. 04, 2021	Radiation (03CH02-CA)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Dec. 08, 2020~ Feb. 03, 2020	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 08, 2020~ Feb. 03, 2020	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 08, 2020~ Feb. 03, 2020	N/A	Radiation (03CH02-CA)
Software	Audix	E3	N/A	N/A	N/A	Dec. 08, 2020~ Feb. 03, 2020	N/A	Radiation (03CH02-CA)
Hygrometer	Testo	608-H1	45142595	N/A	Aug. 05, 2020	Dec. 24, 2020~ Jan. 31, 2021	Aug. 04, 2021	Conducted (TH01-CA)
Power Sensor	DARE	RPR3006W	RPR6W-1901026	10MHz-6GHz	Jun. 24, 2020	Dec. 24, 2020~ Jan. 31, 2021	Jun. 23, 2021	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101089	10Hz-40GHz	Sep. 14, 2020	Dec. 24, 2020~ Jan. 31, 2021	Sep. 13, 2021	Conducted (TH01-CA)
Switch Box & RF Cable	EM Electronics	EMSW26	1090304	N/A	Dec. 30, 2019	Dec. 24, 2020~ Dec. 28, 2020	Dec. 29, 2020	Conducted (TH01-CA)
Switch Box & RF Cable	EM Electronics	EMSW26	1090304	N/A	Dec. 30, 2020	Jan. 01, 2021~ Jan. 31, 2021	Dec. 29, 2021	Conducted (TH01-CA)
LISN	TESEQ	NNB51	47407	N/A	Jul. 06, 2020	Jan. 09, 2021	Jul. 05, 2021	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9KHz~7GHz	Jul. 16, 2020	Jan. 09, 2021	Jul. 15, 2021	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F-N00412	N/A	Jul. 08, 2020	Jan. 09, 2021	Jul. 07, 2021	Conduction (CO01-CA)
Test Software	R&S	EMC32 V10.30.0	N/A	N/A	N/A	Jan. 09, 2021	N/A	Conduction (CO01-CA)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.5

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.1

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.5

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Andy Kao	Temperature:	15.1~19.4	°C
Test Date:	2020/12/24-2021/1/31	Relative Humidity:	33.2~54.3	%

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

Band IV single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	149	5745	17.33	-	31.89	-	16.33	-	0.5	Pass
11a	6Mbps	1	157	5785	17.23	-	33.25	-	16.33	-	0.5	Pass
11a	6Mbps	1	165	5825	17.23	-	32.05	-	16.33	-	0.5	Pass
HT20	MCS0	1	149	5745	18.48	-	34.61	-	17.58	-	0.5	Pass
HT20	MCS0	1	157	5785	18.48	-	35.33	-	17.58	-	0.5	Pass
HT20	MCS0	1	165	5825	18.38	-	34.37	-	17.53	-	0.5	Pass

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TEST RESULTS DATA
Average Power Table

Band IV single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	17.39	-		30.00	-	1.00	-	Pass
11a	6Mbps	1	157	5785	17.19	-		30.00	-	1.00	-	Pass
11a	6Mbps	1	165	5825	17.39	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	149	5745	17.59	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	157	5785	17.69	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	165	5825	17.49	-		30.00	-	1.00	-	Pass
VHT20	MCS8	1	149	5745	17.49	-		30.00	-	1.00	-	Pass
VHT20	MCS8	1	157	5785	17.59	-		30.00	-	1.00	-	Pass
VHT20	MCS8	1	165	5825	17.39	-		30.00	-	1.00	-	Pass

Report Number : FR201216001E

TEST RESULTS DATA
Power Spectral Density

Band IV single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	2.22	-	6.45	-		30.00	-	1.00	-	Pass
11a	6Mbps	1	157	5785	2.22	-	6.50	-		30.00	-	1.00	-	Pass
11a	6Mbps	1	165	5825	2.22	-	6.60	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	149	5745	2.22	-	6.28	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	157	5785	2.22	-	6.42	-		30.00	-	1.00	-	Pass
HT20	MCS0	1	165	5825	2.22	-	6.18	-		30.00	-	1.00	-	Pass

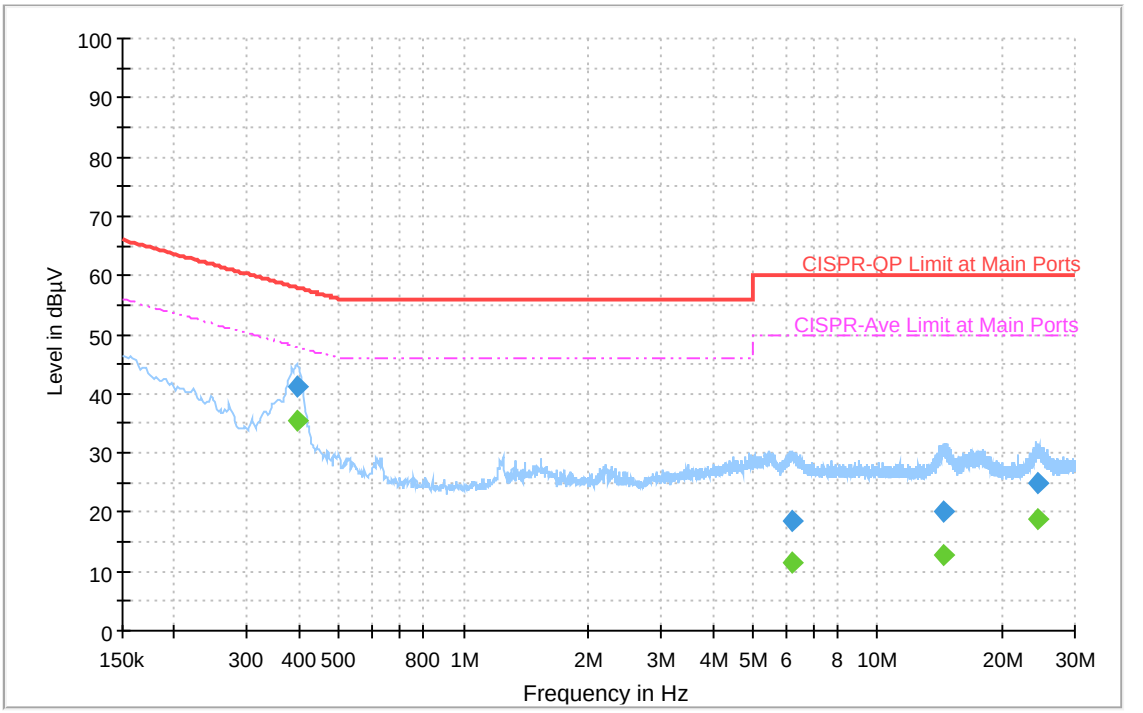
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Janssen Wongso	**Temperature :**	18~21.3℃
		Relative Humidity :	43.3~50.1%

EUT Information

Test Site :	CO01-CA
Mode :	1
Test Voltage :	120Vac/60Hz
Project :	Cypress CYSBSYS
	Line

Full Spectrum



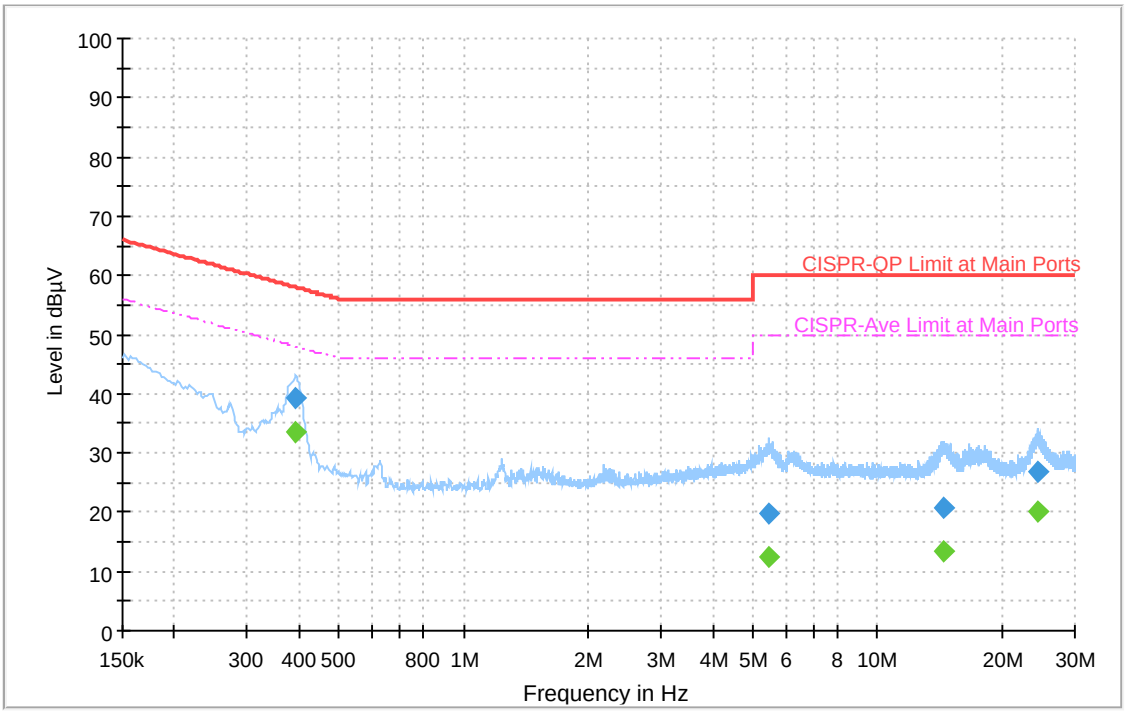
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.395610	---	35.42	47.95	12.53	L1	OFF	20.0
0.395610	41.09	---	57.95	16.86	L1	OFF	20.0
6.209250	---	11.64	50.00	38.36	L1	OFF	20.1
6.209250	18.49	---	60.00	41.51	L1	OFF	20.1
14.469000	---	12.91	50.00	37.09	L1	OFF	20.3
14.469000	20.17	---	60.00	39.83	L1	OFF	20.3
24.349560	---	18.92	50.00	31.08	L1	OFF	20.6
24.349560	24.91	---	60.00	35.09	L1	OFF	20.6

EUT Information

Test Site :	CO01-CA
Mode :	1
Test Voltage :	120Vac/60Hz
Project :	Cypress CYSBSYS
	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.393990	---	33.46	47.98	14.52	N	OFF	20.0
0.393990	39.20	---	57.98	18.78	N	OFF	20.0
5.444250	---	12.35	50.00	37.65	N	OFF	20.1
5.444250	19.94	---	60.00	40.06	N	OFF	20.1
14.482500	---	13.27	50.00	36.73	N	OFF	20.3
14.482500	20.65	---	60.00	39.35	N	OFF	20.3
24.349290	---	20.00	50.00	30.00	N	OFF	20.6
24.349290	26.78	---	60.00	33.22	N	OFF	20.6

Appendix C. Radiated Spurious Emission

Test Engineer :	Calvin Wu	Temperature :	18~22°C
		Relative Humidity :	46~52%

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5620.8	52.33	-15.87	68.2	39.09	31.87	11.55	30.18	268	326	P	H
		5700	58.47	-46.73	105.2	45.09	31.93	11.65	30.2	268	326	P	H
		5717.6	68.54	-41.59	110.13	55.07	32.01	11.67	30.21	268	326	P	H
		5725	73.91	-48.29	122.2	60.41	32.04	11.67	30.21	268	326	P	H
	*	5745	104.56	-	-	90.95	32.13	11.7	30.22	268	326	P	H
	*	5745	96.46	-	-	82.85	32.13	11.7	30.22	268	326	A	H
													H
													H
		5622.2	52.07	-16.13	68.2	38.89	31.8	11.56	30.18	392	253	P	V
		5699.8	54.5	-50.55	105.05	41.09	31.97	11.64	30.2	392	253	P	V
		5718	65.78	-44.46	110.24	52.29	32.03	11.67	30.21	392	253	P	V
		5724.6	68.65	-52.64	121.29	55.14	32.05	11.67	30.21	392	253	P	V
	*	5745	101.28	-	-	87.68	32.12	11.7	30.22	392	253	P	V
	*	5745	93.31	-	-	79.71	32.12	11.7	30.22	392	253	A	V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5625.2	52.49	-15.71	68.2	39.25	31.87	11.56	30.19	267	326	P	H
		5697.6	53.06	-50.37	103.43	39.7	31.92	11.64	30.2	267	326	P	H
		5710.8	51.9	-56.33	108.23	38.46	31.98	11.66	30.2	267	326	P	H
		5724	52.84	-67.08	119.92	39.35	32.03	11.67	30.21	267	326	P	H
	*	5785	103.55	-	-	89.76	32.28	11.74	30.23	267	326	P	H
	*	5785	95.56	-	-	81.77	32.28	11.74	30.23	267	326	A	H
		5850.2	52.38	-69.36	121.74	38.5	32.32	11.82	30.26	267	326	P	H
		5865.8	52.36	-55.41	107.77	38.45	32.34	11.84	30.27	267	326	P	H
		5889.2	53.05	-41.61	94.66	39.11	32.36	11.86	30.28	267	326	P	H
		5930.6	52.62	-15.58	68.2	38.57	32.44	11.91	30.3	267	326	P	H
													H
													H
		5602.8	52.46	-15.74	68.2	39.31	31.79	11.53	30.17	387	251	P	V
		5686.6	52.44	-42.88	95.32	39.08	31.93	11.63	30.2	387	251	P	V
		5714	52.13	-56.99	109.12	38.66	32.02	11.66	30.21	387	251	P	V
		5722	51.74	-63.62	115.36	38.24	32.04	11.67	30.21	387	251	P	V
	*	5785	100.04	-	-	86.34	32.19	11.74	30.23	387	251	P	V
	*	5785	91.99	-	-	78.29	32.19	11.74	30.23	387	251	A	V
		5854.6	52.12	-59.59	111.71	38.24	32.32	11.82	30.26	387	251	P	V
		5856	52.21	-58.31	110.52	38.32	32.33	11.82	30.26	387	251	P	V
		5877.2	53.08	-50.49	103.57	39.08	32.43	11.85	30.28	387	251	P	V
		5927	53.14	-15.06	68.2	39.02	32.51	11.91	30.3	387	251	P	V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	102.95	-	-	89.07	32.33	11.79	30.24	263	326	P	H
	*	5825	95.09	-	-	81.21	32.33	11.79	30.24	263	326	A	H
		5850.4	55.94	-65.35	121.29	42.06	32.32	11.82	30.26	263	326	P	H
		5857.6	55.47	-54.6	110.07	41.57	32.33	11.83	30.26	263	326	P	H
		5883	53	-46.26	99.26	39.06	32.36	11.86	30.28	263	326	P	H
		5926.6	53.34	-14.86	68.2	39.3	32.43	11.91	30.3	263	326	P	H
													H
802.11a													H
CH 165	*	5825	99.85	-	-	86.04	32.26	11.79	30.24	399	245	P	V
5825MHz	*	5825	91.94	-	-	78.13	32.26	11.79	30.24	399	245	A	V
		5850.2	55.67	-66.07	121.74	41.81	32.3	11.82	30.26	399	245	P	V
		5862.6	53.87	-54.8	108.67	39.95	32.36	11.83	30.27	399	245	P	V
		5922.4	52.71	-17.41	70.12	38.59	32.52	11.9	30.3	399	245	P	V
		5929.4	52.36	-15.84	68.2	38.24	32.51	11.91	30.3	399	245	P	V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	52.78	-21.22	74	61.6	40.32	17.56	66.7	226	15	P	H
		11490	42.59	-11.41	54	51.41	40.32	17.56	66.7	226	15	A	H
		17235	52.76	-15.44	68.2	57.84	40.52	21.78	67.38	100	0	P	H
													H
		11490	53.46	-20.54	74	62.26	40.34	17.56	66.7	400	161	P	V
		11490	42.83	-11.17	54	51.63	40.34	17.56	66.7	400	161	A	V
		17235	52.36	-15.84	68.2	57.4	40.56	21.78	67.38	100	0	P	V
													V
802.11a CH 157 5785MHz		11570	49.62	-24.38	74	58.46	40.23	17.63	66.7	100	0	P	H
		17355	53	-15.2	68.2	57.34	41.37	21.86	67.57	100	0	P	H
													H
													H
		11570	50.54	-23.46	74	59.32	40.29	17.63	66.7	100	0	P	V
		17355	53.94	-14.26	68.2	58.32	41.33	21.86	67.57	100	0	P	V
													V
													V
802.11a CH 165 5825MHz		11650	52.89	-21.11	74	61.95	39.93	17.71	66.7	226	13	P	H
		11650	42.41	-11.59	54	51.47	39.93	17.71	66.7	226	13	A	H
		17475	54.86	-13.34	68.2	58.28	42.38	21.96	67.76	100	0	P	H
													H
		11650	52.28	-21.72	74	61.41	39.86	17.71	66.7	400	267	P	V
		11650	42.12	-11.88	54	51.25	39.86	17.71	66.7	400	267	A	V
		17475	54.64	-13.56	68.2	58.05	42.39	21.96	67.76	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5623.8	51.42	-16.78	68.2	38.17	31.87	11.56	30.18	269	327	P	H
		5699.2	59.76	-44.85	104.61	46.39	31.93	11.64	30.2	269	327	P	H
		5710.6	68.37	-39.8	108.17	54.94	31.97	11.66	30.2	269	327	P	H
		5722.6	75.89	-40.84	116.73	62.4	32.03	11.67	30.21	269	327	P	H
	*	5745	104.5	-	-	90.89	32.13	11.7	30.22	269	327	P	H
	*	5745	96.1	-	-	82.49	32.13	11.7	30.22	269	327	A	H
802.11n													H
HT20													H
CH 149		5646.8	51.69	-16.51	68.2	38.5	31.81	11.58	30.2	393	250	P	V
5745MHz		5700	57	-48.2	105.2	43.58	31.97	11.65	30.2	393	250	P	V
		5718.4	63.6	-46.75	110.35	50.11	32.03	11.67	30.21	393	250	P	V
		5725	70.24	-51.96	122.2	56.73	32.05	11.67	30.21	393	250	P	V
	*	5745	101.08	-	-	87.48	32.12	11.7	30.22	393	250	P	V
	*	5745	92.95	-	-	79.35	32.12	11.7	30.22	393	250	A	V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5604.4	51.58	-16.62	68.2	38.34	31.87	11.54	30.17	269	325	P	H
		5696.4	52.64	-49.91	102.55	39.28	31.92	11.64	30.2	269	325	P	H
		5719.2	51.91	-58.67	110.58	38.44	32.01	11.67	30.21	269	325	P	H
		5721.2	53.25	-60.29	113.54	39.77	32.02	11.67	30.21	269	325	P	H
	*	5785	104.14	-	-	90.35	32.28	11.74	30.23	269	325	P	H
	*	5785	96	-	-	82.21	32.28	11.74	30.23	269	325	A	H
		5855	52.6	-58.2	110.8	38.72	32.32	11.82	30.26	269	325	P	H
		5860.2	53.29	-56.05	109.34	39.4	32.33	11.83	30.27	269	325	P	H
		5911.4	53.19	-25.04	78.23	39.19	32.4	11.89	30.29	269	325	P	H
		5948	53.22	-14.98	68.2	39.12	32.48	11.93	30.31	269	325	P	H
802.11n													H
HT20													H
CH 157		5604.8	52.07	-16.13	68.2	38.91	31.79	11.54	30.17	387	249	P	V
5785MHz		5669.8	51.5	-31.39	82.89	38.21	31.88	11.61	30.2	387	249	P	V
		5712.2	51.35	-57.27	108.62	37.88	32.01	11.66	30.2	387	249	P	V
		5723.4	50.81	-67.74	118.55	37.3	32.05	11.67	30.21	387	249	P	V
	*	5785	100.86	-	-	87.16	32.19	11.74	30.23	387	249	P	V
	*	5785	92.5	-	-	78.8	32.19	11.74	30.23	387	249	A	V
		5854.8	52.67	-58.59	111.26	38.79	32.32	11.82	30.26	387	249	P	V
		5871	52.85	-53.47	106.32	38.88	32.4	11.84	30.27	387	249	P	V
		5909.2	53.21	-26.65	79.86	39.08	32.53	11.89	30.29	387	249	P	V
		5948.2	53.99	-14.21	68.2	39.87	32.5	11.93	30.31	387	249	P	V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	102.83	-	-	88.95	32.33	11.79	30.24	277	325	P	H
	*	5825	94.9	-	-	81.02	32.33	11.79	30.24	277	325	A	H
		5850	61.98	-60.22	122.2	48.1	32.32	11.82	30.26	277	325	P	H
		5858.2	58.37	-51.53	109.9	44.47	32.33	11.83	30.26	277	325	P	H
		5909.4	53.73	-25.98	79.71	39.73	32.4	11.89	30.29	277	325	P	H
		5946.4	53.67	-14.53	68.2	39.57	32.48	11.93	30.31	277	325	P	H
802.11n													H
HT20													H
CH 165	*	5825	100.01	-	-	86.2	32.26	11.79	30.24	381	248	P	V
5825MHz	*	5825	91.84	-	-	78.03	32.26	11.79	30.24	381	248	A	V
		5850	58.08	-64.12	122.2	44.22	32.3	11.82	30.26	381	248	P	V
		5855.4	53.63	-57.06	110.69	39.75	32.32	11.82	30.26	381	248	P	V
		5908	53.24	-27.5	80.74	39.12	32.53	11.88	30.29	381	248	P	V
		5945.8	52.72	-15.48	68.2	38.6	32.5	11.93	30.31	381	248	P	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Emission below 1GHz

WIFI 802.11a (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a LF		60.07	21.58	-18.42	40	41	11.7	1.32	32.44	-	-	P	H
		105.66	30.52	-12.98	43.5	44.67	16.57	1.7	32.42	-	-	P	H
		167.74	24.55	-18.95	43.5	38.93	15.93	2.1	32.41	-	-	P	H
		216.24	25.7	-20.3	46	40.77	14.92	2.41	32.4	-	-	P	H
		312.27	32.88	-13.12	46	43.05	19.4	2.87	32.44	-	-	P	H
		839.95	33.98	-12.02	46	32.47	28.8	4.76	32.05	100	0	P	H
													H
													H
													H
													H
													H
													H
		74.62	18.68	-21.32	40	36.71	12.86	1.54	32.43	-	-	P	V
		105.66	30.3	-13.2	43.5	44.45	16.57	1.7	32.42	-	-	P	V
		167.74	26.35	-17.15	43.5	40.73	15.93	2.1	32.41	-	-	P	V
		216.24	24.2	-21.8	46	39.27	14.92	2.41	32.4	-	-	P	V
		312.27	31.77	-14.23	46	41.94	19.4	2.87	32.44	-	-	P	V
		888.45	35.31	-10.69	46	33.07	29.07	4.91	31.74	100	0	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix D. Radiated Spurious Emission Plots

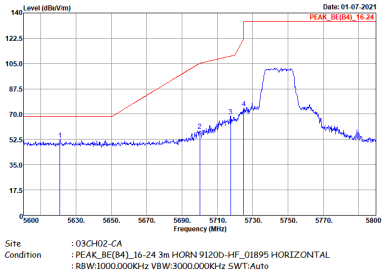
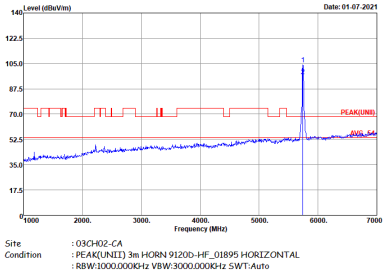
Test Engineer :	Calvin Wu	**Temperature :**	18~22°C
		Relative Humidity :	46~52%

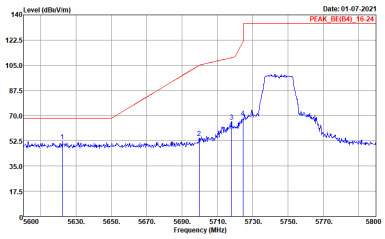
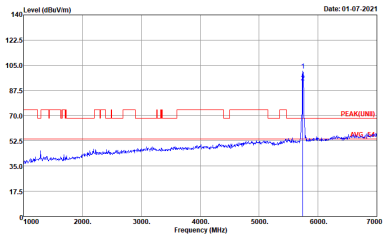
Note symbol

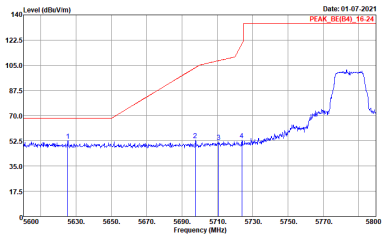
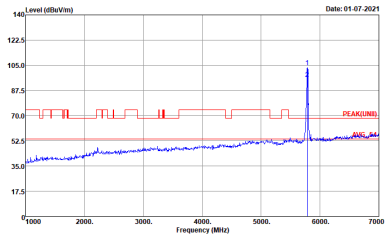
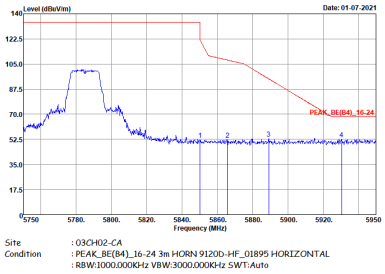
-L	**Low channel location**
-R	**High channel location**

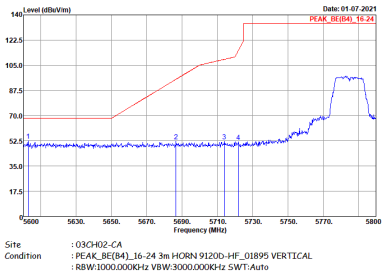
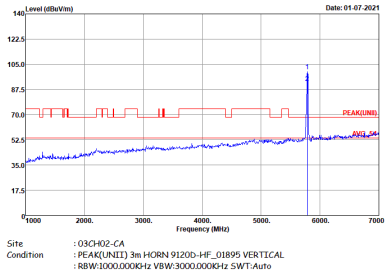
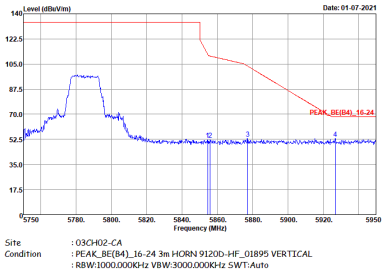
Band 4 - 5725~5850MHz

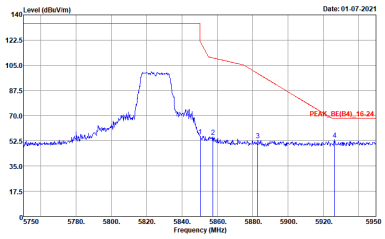
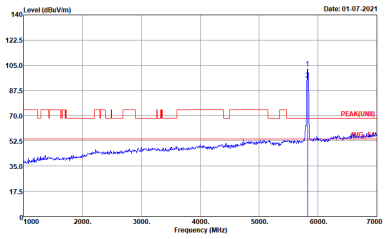
WIFI 802.11a (Band Edge @ 3m)

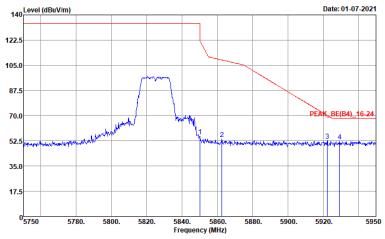
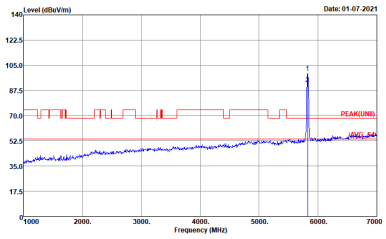
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

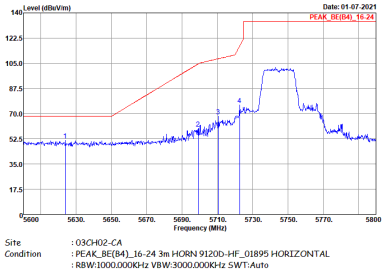
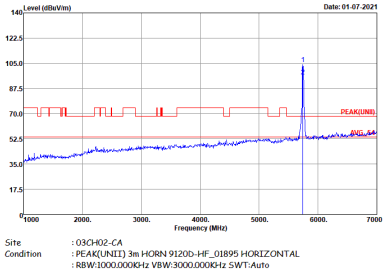
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

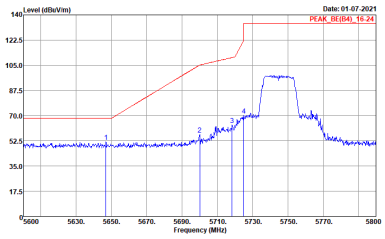
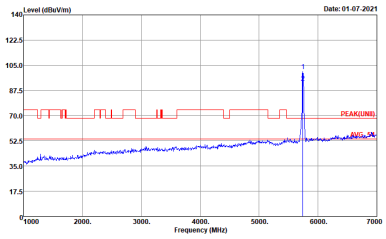
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

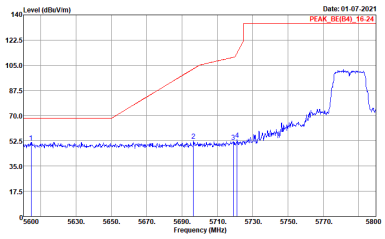
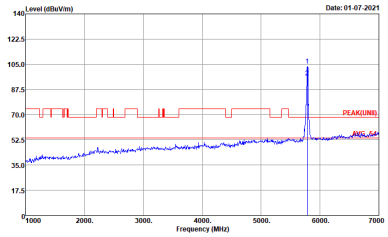
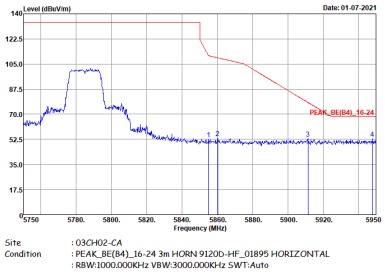
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak		

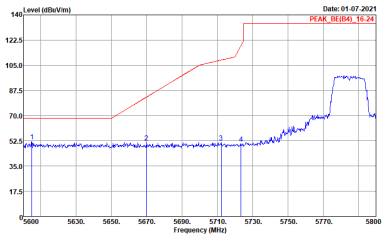
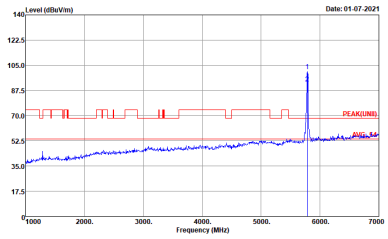
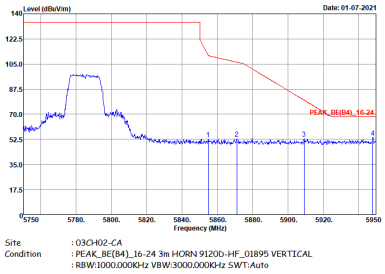
Band 4 5725~5850MHz

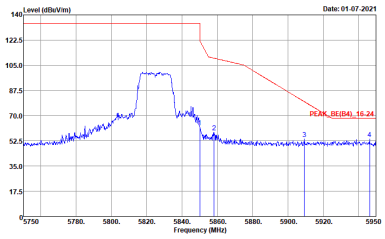
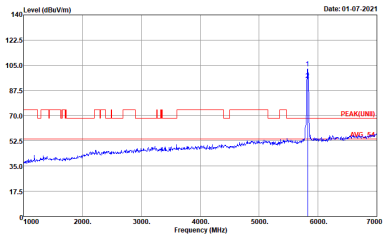
WIFI 802.11n HT20 (Band Edge @ 3m)

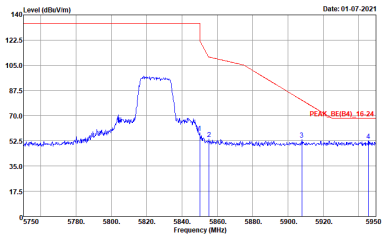
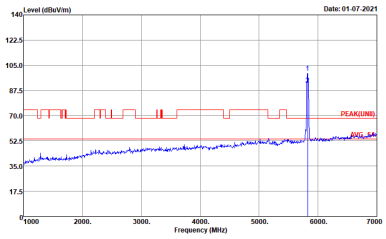
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

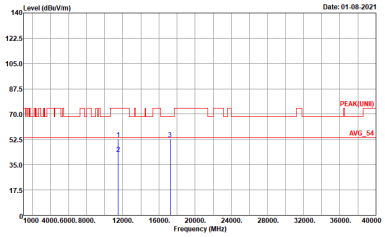
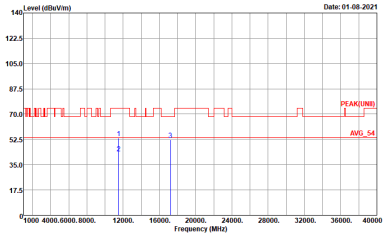
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

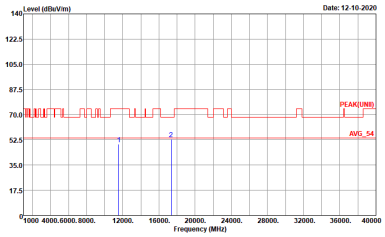
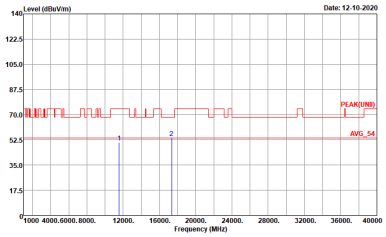
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

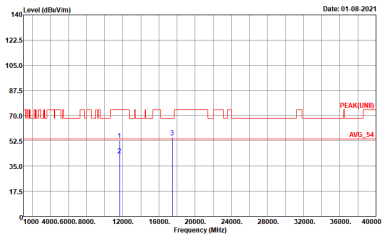
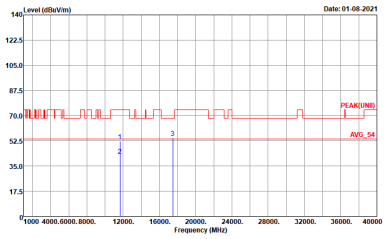
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak		

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

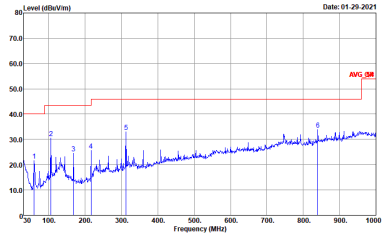
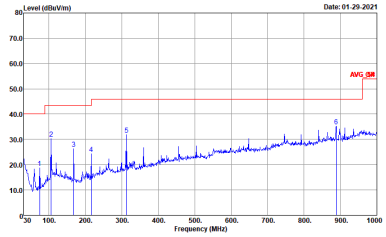
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

Emission below 1GHz

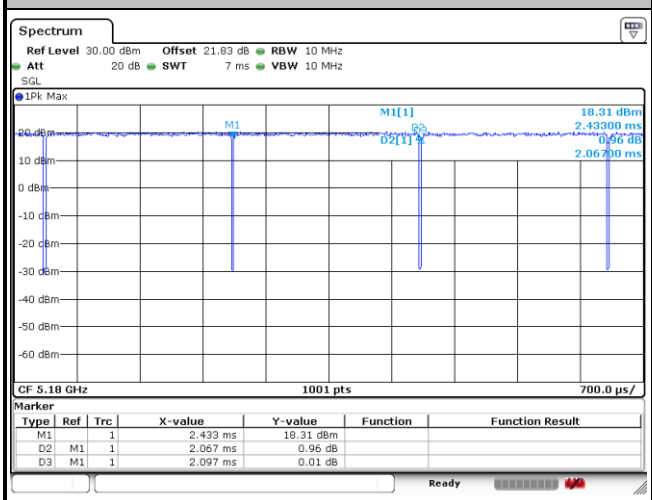
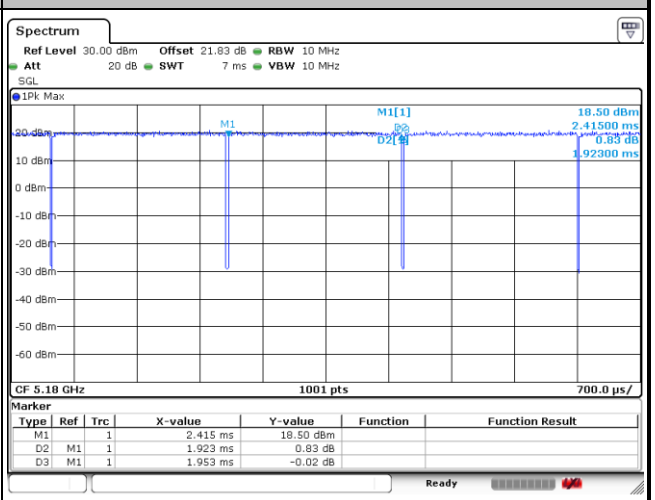
5GHz WIFI 802.11a (LF)

WIFI	5GHz WIFI	
ANT	802.11a LF	
1	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11a	98.57	-	-	10Hz	0.06
5GHz 802.11n HT20	98.46	-	-	10Hz	0.07

802.11a



802.11n HT20